PREVALENSI HEPATITIS B DAN HEPATITIS C PADA UNIT TRANSFUSI DARAH PALANG MERAH INDONESIA PROVINSI NUSA TENGGARA TIMUR TAHUN 2017

Hepatitis B and C Prevalence on Blood Transfussion Unit of PMI Nusa Tenggara Timur in 2017

⇨ **The Relation of Blood Donors' Characteristic toward Prevalences of HBsAG and Anti-HCV on Blood Transfussion Unit of PMI Nusa Tenggara Timur**

Abstrak

Hepatitis B merupakan suatu peradangan hati yang disebabkan oleh virus Hepatitis B (VHB) yang merupakan anggota family hepadnavirus. Hepatitis C merupakan suatu penyakit peradangan hati yang disebabkan oleh virus hepatitis C (VHC) dan dalam jangka panjang menimbulkan sirosis hati. Kedua virus ini dapat ditularkan secara vertikal dari ibu ke anak maupun horizontal salah satunya melalui transfusi darah. Berdasarkan hal tersebut dilakukan penelitian ini untuk mengetahui prevalensi HBsAg dan Anti-HCV dan hubungannya dengan jenis kelamin, usia, dan pekerjaan pendonor di UTD PMI Provinsi Nusa Tenggara Timur tahun 2017. Penelitian yang digunakan adalah analitik korelasi dengan jenis penelitian *cross sectional.*Populasi dalam penelitian ini adalah data hasil uji saring darah pendonor pada tahun 2017, dengan sampel untuk pemeriksaan HBsAg dan Anti-HCV sebesar 400 sampel, yang didapat dari rumus Solvin dengan teknik pengambilan random sampling. Hasil yang diperoleh sebanyak 14 pendonor (3,5%) HBsAg reaktif, dan 2 pendonor (0,5%) Anti-HCV reaktif, hasil analisa statistik uji hubungan antara status HBsAg dan status anti-HCV dengan umur, jenis kelamin, dan pekerjaan pendonor menunjukan nilai p>0,05, disimpulkan tidak ada hubungan antara status HBsAg dan anti-HCV dengan umur, jenis kelamin, dan pekerjaan pendonor.

Kata Kunci : Prevalensi, HBsAg reaktif , Anti-HCV reaktif, UTD PMI.

Abstract

Hepatitis B is an inflammation of the liver caused by the Hepatitis B virus (HBV) which is a member of the Hepadnavirus family. Hepatitis C is an inflammation of the liver caused by the hepatitis C virus (VHC) and in the long run causes cirrhosis of the liver. Both of these viruses can be transmitted vertically from mother to child or horizontally one of them through blood transfusion. This study aims to determine the prevalence of HBsAg and Anti-HCV in UTD PMI East Nusa Tenggara Province in 2017 which are associated with age, sex, and donor's occupation. The was a cross sectional research with analytic correlation.The population in this study was taken from secundair data of donor blood screening test in 2017. There were 400 samples who had been tested with HBsAg and Anti-HCV and obtained from the Solvin formula with random sampling technique. The data were then processed by SPSS to determine the prevalence, relationships, and risk factors (gak ada datanya yaa..). The result was 14 (3.5%) HBsAg reactive donors, and 2 (0.5%) Anti-HCV reactive donors. It was concluded that there was no relationship between HBsAg status and anti-HCV status with age, sex, and donor's occupation.

Keywords: Prevalence, HBsAg and Anti-HCV reactive, UTD PMI

Introduction

Hepatitis B and C are one of helath problem in the world. The patients with this infection has a high risk to become liver cirrhosis and develop into hepar cell carcinoma (Brass dan karsinoma hepatoseluler) [2]. According to WHO (2017), there were 399.000 people died every year due to Hepatitis C. There were 257 million people live with Hepatitis B and 500.000 – 1.200.000 died due to this virus [15]. The most endemic area are Asia Pasifik, Africa, South Europe and Latin America [1]. Indonesia included to the moderate-high endemic area of hepatitis especially hepatitis B with 8%-20% prevalence [8]. It was predicted that 28 million of the population were contaminated with Hepatitis B and C. Moreover, 14 million of them were potentially becoming chronic and 1,4 million were becoming liver cirrhosis .

According to Health profile of Nusa Tenggara Timur in 2015, the sequence of hepatitis happened was Hepatitis B (29.6%), Hepatitis A (27.9%) and Hepatitis C and others (…%). The highest proportion of Hepatitis B happened in Sabu Raijuna (100% → gak salah neh? Semua penduduk?) and 74.6% of Hepatitis A happened in Manggarai. The high prevalence of Hepatitis was caused by the vertical transmission from mother to her child in prenatal and peri-natal period [3] and horizontal transmission due to blood transfusion [9]

Blood transfusion is a medical treatment which transfers blood or blood's component into circulation system from the donor to recipient [5]. It should be healthy, comfortable, clinical effective and in good quality for the recipients, donors, health workers and society. Due to this condition, the product's safety must be maintained by medical selection through blood filter test. This test could detect the contagious infection from blood transfusion (IMLTD) such as *Human immunodefi- cency virus* (HIV), hepatitis B, hepatitis C, dan syphilis. From these four contagious infection, Hepatitis B and C are the serious problems for blood donor Unit. N.Ventiani stated that the positive HBsAG through blood filter test was 3.61% from blood donors in UTD PMI Padang in Januari-Decmber 2012 [11]. The prevalence of Hepatitis C among blood donors in Indonesi in 2012 was 0.39% [7]. Sudarmono and Gani (2013) detected there was 0.47% blood donors who reactive Hepatitis C in 24 branches of Blood Transfussion Unit in Indonesia. According to the Ministry of Health Report, blood filter test detected the infection of Hepatitis B was 1.64% and Hepatitis C was 0.41%.

Blood Transfusion Unit PMI in Nusa Tenggara Timur has 10 branches which are 6 branches of UTD Local Government and 4 branches of UTD PMI. UTD PMI had 12.000 blood donors in Kupang. This UTD PMI needs 1.800 blood bags every month. According to Public Health Office in Kupang, from 13.163 blood donors in 2016, there were 2.61% of Hepatitis B and 0.018% of Hepatitis C. But, there hasn't been any research of it before. Through this study, we could learn about the prevalence of Hepatitis B and C among blood donors in UTD PMI NTT

Methode

This was a cross sectional study with correlative analytic. The population was the blood donors who had blood filter test and reactived to Hepatitis B and C in UTD PMI Nusa Tenggara Timur in 2017. By Slovin, the samples were 400 blood donors. The data would be analyzed by Cramer correlation test and Chi Square

Hasil

Penelitian status HBsAg dan status anti-HCV melibatkan 400 data pendonor berdasarkan formulir donor di UTD PMI Provinsi NTT tahun 2017. Dengan karakteristik pendonor pada tabel

Table 1. Characteristic of Blood Donors

No	Characteristic	Frequent	Percentage(%)
1.	**Sex**		
	Male	312	78 %
	Female	88	22 %
2.	**Age**		
	17-30	206	51,5 %
	31-40	120	30,0 %
	41-50	54	13,5 %
	51-60	19	4,8 %
	>60	1	0,2 %
3.	**Occupation**		
	Police/Soldier	42	10,5 %
	Govern employee	77	19,2 %
	Students	48	12,0 %
	Private employee	70	17,5 %
	Farmer	7	1,8 %
	Others	156	39,0 %

➔ Others terlalu besar jumlahnya dibandingkan yang lain, jadi aneh kelihatannya. Mungkin bisa dipecah lagi persentasenya. Mungkin jumlah tenaga kesehatan, satpam, ibu RT dibuat jumlahnya sehingga kelompok Others sisanya menjadi sedikit

Table 1 showed that male was higher than female to become blood donors. Moreover, most of the blood donors were around 17-30 years old.

Table 2. Result of Blood Filter Test on HBsAg and Anti HCV

Test Result	HBsAg		Anti HCV	
	Frequent	Percentage	Frequent	Percentage
Positive	14	3.5	2	0.5
Negative	386	96.5	398	99.5
Total	400	100	400	100

From Table 2, we could see that the blood donors who infected with Hepatitis B were 3.5% and only 0.5% contaminated with Hepatitis C

Table 3 – Statistic Analyzes of Blood Donors' Characteristic

No	Blood Donors' Characteristic	HBsAg Positive		Anti-HCV Positive	
		Cramer's V Score	P value	Cramer's V Score	P value
1	**Sex** Male Female	0,958	0,958	0,451	0,451
2	**Age** 17-30 31-40 41-50 51-60 >60	0,274	0,274	-	0,076
3	**Occupation** Police/Soldier Govern employee Students Private employee Farmer Others	0,661	0,661	0,628	0,628

Data analyzes with statistic showed (Table 3) that the p value of each characteristic (Sex, Age and Occupation) toward Hepatitis B and C were > 0.005. It meant that there was no relation between blood donors' characteristic toward the Prevalence of Hepatitis B and C. The same with the research in Ethiopia (2017), the prevalence of Hepatitis C on blood donors were only 0.32% and no significant difference. This might be caused by the lowest amount compared by the whole [3].

Pada penelitian yang dilakukan oleh Resmi dan Jarwaty pada tahun 2013 menunjukkan orang yang pekerjaannya berhubungan dengan jarum suntik seperti dokter gigi dan pembuat tato, beresiko tinggi terinfeksi hepatitis C, hasil ini mendukung penelitian.

Ketidaktersediaan data pendonor yang terkomputerisasi menjadi kelemahan dalam penelitian ini, dimana jumlah data yang dibutuhkan harus di input secara manual berdasarkan formulir donor di UTD PMI Provinsi NTT, sehingga penelitian hanya dilakukan pada kurun waktu 1

tahun terakhir. Selain itu, data yang diinput dapat secara berulang karena tidak tersedia informasi berapa kali seseorang melakukan donor darah.

USUL:

1. Sebaiknya dibuat pernguraian data dari yg terpapar oleh Hepatitis B dan C ditinjau berdasarkan karakteristik pendonor.

Frequency distribution of Blood Donors Characteristic toward Hepatitis B & C

Blood donors characteristic	HBsAg Positive	Anti HBC Positive
Sex Male Female		
Age 17-30 31-40 41-50 51-60 >60		
Occupation Police/Soldier Govern employee Students Private employee Farmer Others		

2. Baru dianalisa datanya sehingga bisa terlihat lebih jelas
3. Kelompok Occupation dipecah jadi :
   a. Police/Soldier/Satpam
   b. Employee (gabung aja antara PNS dan swasta)
   c. Students
   d. Farmer
   e. Housewife
   f. Medical Staff
   g. Social workers(pendeta, ustad,dll)
   h. others

Conclusion

It could be concluded that the prevalence of Hepatitis B was 3.5% and 0.5% for Hepatitis C. There was no relation between the characteristic of blood donors toward the Prevalence of Hepatitis B and C

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